



Virtual Binocular SV Detailed Datasheet Rev B

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Product Specifications

Optical

FOV, Monocular (diagonal)	43.5 °
FOV, Vertical	25.5 °
FOV, Horizontal	34.5 °
Shape Of View (SOV) Type 1	Full Rectangular (Type 1)
FOV, Binocular (diagonal)	43.5 °
Overlap	100%
Pupil Size	5, Non-Real mm
Eye Relief	13 mm
Geometric Distortion	+9% Maximum (Pincushion)
Accommodation (Fixed Or User Adjustable Range)	-4 to +4 diopter
Convergence Angle	0 °
Dipvergence (Vertical Misalignment)	4 MAX MOA
Rotational Misalignment	Not to produce more than 4 MOA of vertical misalignment at the edge of the field
Brightness (MAX)	30 fL
Chromaticity (X)	.313
Chromaticity (Y)	.329
Contrast (Min.)	800:1
Image Defect Criteria	See document 104959
Spatial Resolution	2.58 arcmin/pxl

Microdisplay

Display Technology	Organic Light-Emitting Diode (OLED)
Resolution	SVGA 800 x 600
Pixel Format	15 x 15 micron square pixels comprised of three vertical 5 x 15 micron sub pixels with R G B filters.
Color Depth	24-BIT (8 bits per R,G,B)

Video

Video Input Format	SVGA 800 x 600 @ 60 Hz
Video Interface	Analog over Left and Right HD15 (VGA) Connectors
VCU Interface	Mates with NVIS external Video Control Unit through umbilical cable for Stereo / Mono operation.
Latency	< 0.002 ms
Video Image Quality	No visible artifacts, noise or abnormalities

Controls

On/Off Control	Power (Tactile dome switch)
Display Configuration Control	Configuration via VCU menu system
User Input Button(s)	6 programmable USB buttons, 3 per side, on top of display.
	Button 1 Right Proximal
	Button 2 Right Middle
	Button 3 Right Distal
	Button 4 Left Proximal
	Button 5 Left Middle
	Button 6 Left Distal
User Input Scroll Wheel	1 USB scroll wheel on top of display (8 bit, 300 degree rotation, linked to joystick "Z" axis)
Interpupillary Distance (IPD) Range	55-73 (via underside thumb wheel) mm

Indicators

Power On/Off Indicator	Power indicator LED. Illuminates when USB power is connected LCD illuminates when unit is powered on.
Sync (video Signal) Indicator	Sync indicated by VCU display when proper video format is provided

Power

Power Consumption (TYP)	2.5 W
Power Source	USB (4.75 - 5.25 VDC, 500 mA)
Power Input	4.75 - 5.25 VDC, 500 mA over USB type B Connector

Physical

Size (envelope)	6.64 L x 6.06 W x 2.97 H in
Mass	685 g
Color	Matte Green
Cable Exit	Downward exit from bottom of display.
Cable Length	5.1 m
Cable Minimum Bend Radius	1 in
Cable Makeup	Single custom cable
Tripod Mounting	1/4"-20 TPI tripod mount standard on bottom of display
Trackers Supported	InterSense InertiaCube 2 InterSense InertiaCube 3 InterSense IS900
Tracker Mounting	Mounting bosses on interior of removable tracker door on bottom of display
Logo, Labels, Markings	Serial Number on bottom of display, NVIS Logo on top of display

Environment

Operating Temperature Range	-46 to 65 °C
Operating Humidity Range	85% Relative Humidity
Storage Temperature Range	-55 to 90 °C

Storage Humidity Range

85% Relative Humidity

Compliance

CE Compliance

CE Compliant

RoHS Compliance

RoHS Compliant

Drawings

